

U.S. Patent Application Serial No. 10/808,446
Response filed March 14, 2007
Reply to OA dated December 14, 2006

REMARKS

Claims 4, 5 and 7-9 are pending.

The support for the amendment to claim 4 is on p.12, lines 18-20 and p.18, lines 5-8. The applicants respectfully submit that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated December 14, 2006.

Claims 4-5 and 7-9 are rejected under 35 USC 112, second paragraph as failing to comply with the written description requirement.

The negative limitation has been removed, making this rejection now moot.

Claims 4-5 and 7-9 are rejected under 35 USC 112, first paragraph as being indefinite.

The limitation has been removed, making this rejection now moot.

Claims 4-5 and 7-9 are rejected under 35 USC 103(a) as being unpatentable over Reaney (USP 5,162,149) in view of Pelland, et al., (USP 6,471,803).

The claimed invention is limited to a combination of three elements:

an asymmetric porous polytetrafluoroethylene membrane for clothing, an adhesive,
and a woven or non-woven fabric,

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It is clear that no other cited reference shows the exclusive combination of the above three elements in the claimed structure, **where the woven or non-woven fabric is laminated on the outer surface of the dense skin layer of said asymmetric porous polytetrafluoroethylene membrane for clothing by interposing the adhesive.** In FIG. 1 of Reaney expanded porous PTFE layer 11 has pores which are filled with a cured or partially cured thermosetting adhesive 12. Bonded to cured or partially cured thermosetting adhesive 12 is a layer of thermoplastic hot melt adhesive 14. The structure of Reaney is designed so that the adhesive property of the PTFE membrane and the fabric is improved by the adhesive agent penetrating into the slot of the former porous layer. Since Pelland just shows conventional adhesive tape and not the claimed structure, its combination with Reaney does not make obvious **the claimed invention where the adhesive layer is laminated on the skin layer of the PTFE.** This structure is nowhere disclosed or even suggested in the references.

Even more, in any combination of the cited references, nowhere is there suggested a combination of only three elements that can give the claimed performance, namely:

- (1) the contact angle of water to the surface of said skin layer is 120 to 140°;
- (2) the diffuse reflectance of light of said skin layer is 91 to 94%.

Therefore it is logically impossible for the invention now claimed to be obvious in light of the above cited references.

In light of the invention as now claimed, it is asserted that rejection is now overcome.

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Claims 4-5 and 7-9 are rejected under 35 USC 103(a) as being unpatentable over Reaney (USP 5,162,149) in view of anyone of Pelland, et al., (USP 6,471,803) or Springs (USP 5,382,223) in view of anyone of Bellairs (USP 4,836,788) or Henn et al. (USP 5,026,591).

Since none of Springs, Bellairs or Henn disclose the claimed invention of only, an asymmetric porous polytetrafluoroethylene membrane for clothing, an adhesive and a woven or non-woven fabric **in the recited structure**, the combination logically fails to make the invention obvious.

The multilayer structure of the prior art is illustrated in FIG. 7 of Springs (joint 26 is covered by internal and external synthetic resin seam tape sections 28, 30); FIG. 1 and claim 1 of Bellairs (a microporous membrane 10 is sandwiched between a cellular foam adhesive layer 12 and a continuous, protective film 14, with the fabric substrate 16 being attached to the cellular foam adhesive layer 12); and FIG. 2 and claim 1 of Henn (a fabric substrate connected to a microporous scaffold material, like expanded PTFE, which is filled with a thermoplastic or thermosetting resin).

Springs merely discloses ordinary adhesive, the structure of Bellairs with the fabric attached to the cellular foam layer is opposite the **claimed structure where the adhesive is in between the skin layer and the fabric**, and in Henn the adhesive is *inside* the expanded microporous PTFE which is unrelated to the claimed structure.

Thus based on any combination of the prior art structures, none of which suggest the claimed structure, it is logically impossible to derive a woven or non-woven fabric being laminated on the

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outer surface of a dense skin layer of an asymmetric porous polytetrafluoroethylene membrane for clothing by interposing the adhesive. Therefore the rejection must fail.

It is respectfully requested that the rejection be reconsidered and withdrawn.

In view of the aforementioned amendments and accompanying remarks, claims 4, 5 and 7-9, as amended, are in condition for allowance, which action, at an early date, is requested.

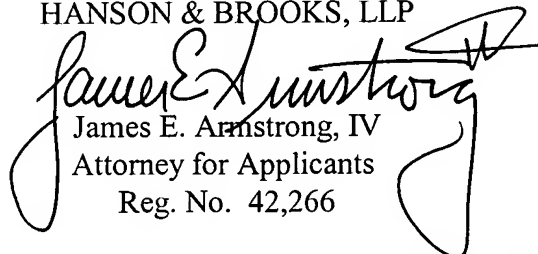
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If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS,
HANSON & BROOKS, LLP


James E. Armstrong, IV
Attorney for Applicants
Reg. No. 42,266

JAM/rk
Atty. Docket No. **040139**
Suite 1000
1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930



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